

Probe for Oil Pollution Evidence In the Environment



POPEIE ('päp 'i)



Imagine!



Having a Wonderful Coast Guard Day!



And Then,



You spot trouble!



Oil, what oil?



Three days later...



Where Do “Mystery Spills” Come From?






Ships reported discharging oil.

- T/V Command (1998).
- M/V Holger Sif (1998).
- M/V Star Evvira (1999).
- M/V Le Sheng (2000 Canadian CG case).

Ships found with OWS problems





Companies convicted or had plead guilty to charges including illegal discharge of oil

- Matson navigation company.
- Evergreen America corporation.
- Royal Caribbean cruise lines.
- Carnival cruise lines.



The costs add up!

- According to national pollution funds center FY 2000 Year in Review.
 - \$30 million in the last 10 years for “mystery spills”.
 - \$10 million in the previous 2 years.

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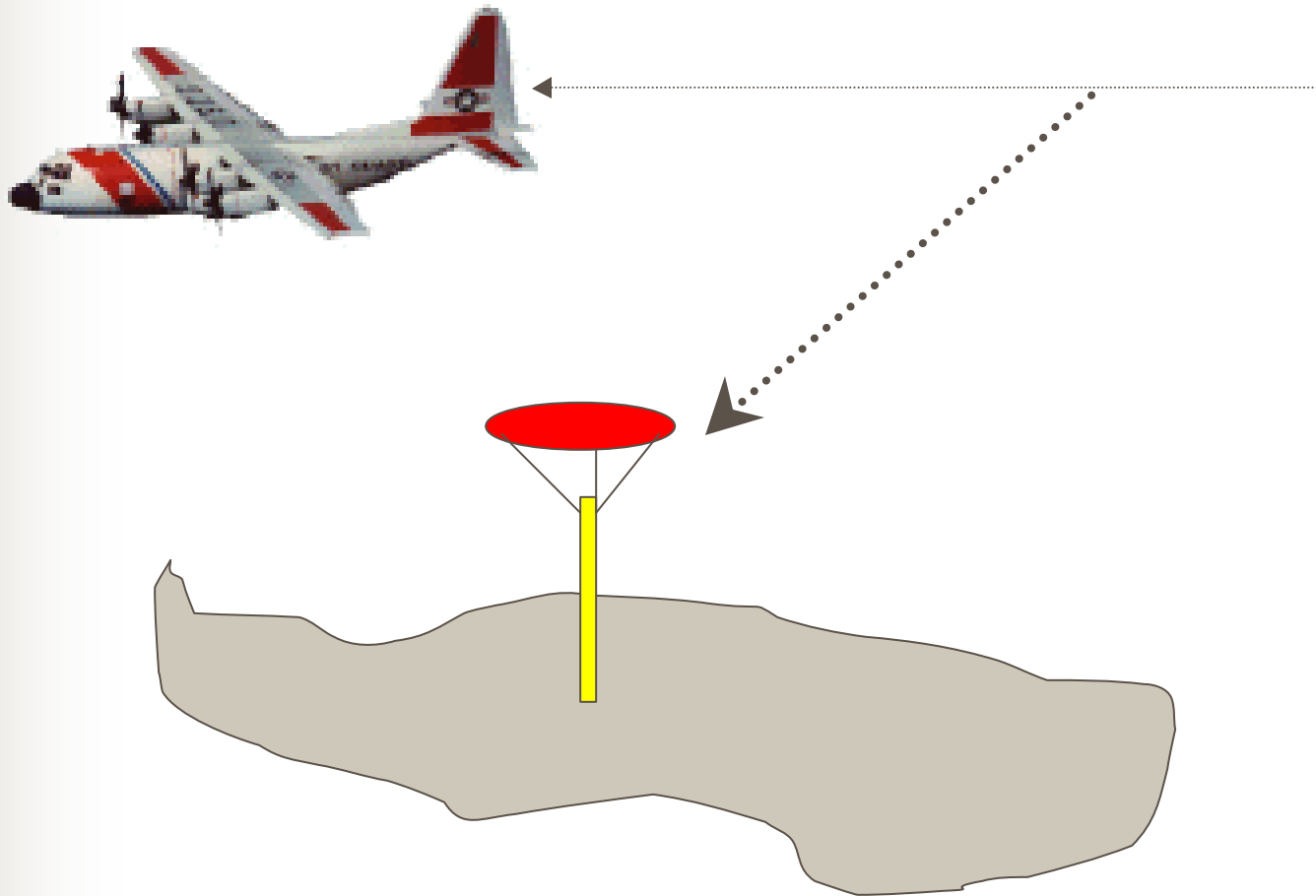




What is POPEIE?

- POPEIE is a unique combination of existing technologies.
 - Air deployable data marker buoys are commonly used.
 - Oil sheens are routinely sampled using specialized sheen nets.
 - Radio and satellite beacons are used to provide position information.
- Combining these technologies resulted in a new law enforcement tool.

The C-130 (or helicopter)
expertly drops POPEIE into slick





What happens next?

- POPEIE passively collects a sample of the oil.
 - The sampling chamber opens and remains open for one hour.
- When the sampling chamber closes the beacon is activated.
 - Currently the beacon uses a VHF signal for direction finding.



How Is the Sample Used?

- The oil sample can be “fingerprinted” against samples taken from suspect vessels.
 - Suspect vessels known to have been in or passing through the area.
- A match will lead to a successful prosecution.



What's next?

- Operational testing at Oil and Hazardous Materials Simulated Environment Test Tank (OHMSETT).
- Upgrade of electronics to satellite transmission of GPS position information.
- Addition of parachute for deployment.
- Currently ready for limited use, fully operation by December, 2002.

The result...happy wildlife!



Any questions?

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